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THE EVOLUTION OF WIRED COMMUNICATIONS NETWORKS

WEDNESDAY, OCTOBER 23, 2013

House of Representatives,

Subcommittee on Communications

and Technology,

Committee on Energy and Commerce,

Washington, D.C.

The subcommittee met, pursuant to notice, at 10:34 a.m., in Room 2123, Rayburn House Office Building, Hon. Greg Walden [chairman of the subcommittee] presiding.

Present: Representatives Walden, Latta, Shimkus, Terry, Blackburn, Scalise, Lance, Guthrie, Gardner, Pompeo, Kinzinger, Long, Ellmers, Barton, Upton (ex officio), Eshoo, Doyle, Matsui, Welch, Dingell, Pallone, DeGette, Butterfield and Waxman (ex officio).

Staff Present: Gary Andres, Staff Director; Ray Baum, Senior Policy Advisor/Director of Coalitions; Andy Duberstein, Deputy Press Secretary; Kelsey Guyselman, Counsel, Telecom; Grace Koh, Counsel, Telecom; David Redl, Counsel, Telecom; Charlotte Savercool, Legislative Coordinator; Jessica Wilkerson, Staff Assistant; Roger Sherman, Minority Chief Counsel; Shawn Chang, Minority Senior Counsel; Margaret McCarthy, Minority Professional Staff Member; Kara van Stralen, Minority Policy Analyst; and Patrick Donovan, Minority FCC Detailee.

Mr. Walden. We will call the Subcommittee on Communications and Technology to order and begin our hearing on the evolution of wired communications networks.

Wired communications networks have come a long way since the days of the telegraph or the rotary phone. It is getting harder and harder to remember a time when if you wanted to reach out and touch someone, Ma Bell's pair of twisted copper wires were the only option. Today's consumers have so many more options. Cable, wireless, satellite, and, yes, even the telephone companies are all offering Americans the connectivity to communicate with the world.

As all of the services consumers have grown to love as standalone networks, like voice and video, are increasingly just data applications, completion between network providers has never been more vigorous, and over-the-top providers like Skype, Apple, Apple's Facetime, Netflix, and Hulu are bringing a new facet to competition for consumers' communications dollars. But while their competitors have gone through successive generations of technological improvements, wired communications networks have languished. This isn't because of a lack of innovation, but rather because of a declining user base. High costs and unique regulatory mandates have conspired to make the economics of upgrade untenable.

Today, however, we stand on the cusp of two transitions in the wires network: the IP transition and the upgrade of the

networks to fiber. Now, these transitions are a natural evolution as technology advances, greater capabilities develop, prices drop, and competition forces the market to respond.

While some of the costs of upgrade have changed, and wire line providers are increasingly branching out beyond their voice service roots, the outdated regulations once enacted to break up a monopoly remain. Consumers have come to expect, as well as they should, competition among providers in the innovation -- innovative offerings that result from that competition. The question we face today is this: What is the appropriate role for the Federal Government in this transition?

We should be looking not only on the theoretical impact of competition policies on the market as they exist today, but also to the practical impact of the rules in an uncertain future. ILECs looking to invest in future technologies should be able to do so without the specter of maintaining legacy networks. Those in the competitive community should be able to look to the future with the certainty that they have the opportunity to serve their customers. And consumers should be able to embrace this transition without an interruption in the services they already enjoy.

We must strike the appropriate balance between protecting consumers, promoting competition, and not slowing the pace of needed innovation. The Internet and wireless worlds have thrived without heavy regulation. The last thing we want do is stifle the

unprecedented growth in innovation of the Internet by subjecting it to complicated, outdated, government-imposed rules of the plain, old telephone networks.

It is time to take a hard look at the role of regulation in the modern wired communications network marketplace, and our witnesses are here to help us do just that. I think the witnesses -- I thank the witnesses for their testimony, and now I would yield to my colleague from Texas Mr. Barton for 1 minute.

[The prepared statement of Mr. Walden follows:]

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Mr. Barton. Thank you, Mr. Chairman. That is perfect timing; I just walked in.

I want to thank you for holding this hearing on the transition of the Internet -- Internet Protocol. It is a topic that we have not discussed, but we need to discuss in this Congress.

I was actually serving on this subcommittee and the full committee back in 1996 and participated in many conversations, debates, hearings and markups regarding that act. I remember discussing how we could make the marketplace more competitive. And at that time AT&T did basically have monopoly, and we believed that creating the incumbent local exchange, the ILECs, and then the competitive local exchange, was a good solution to spur competition.

That marketplace then and the marketplace today, Mr. Chairman, as you know, are not the same. I do question now whether we need the Title 2 protections of the CLECs that we put in place back in 1996, and I think this hearing is a good start to answering that question.

Mr. Walden. Thank you.

[The prepared statement of Mr. Barton follows:]

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Mr. Walden. And I now recognize the gentleman from Ohio Mr. Latta for 42 seconds.

Mr. Latta. Thank you very much, Mr. Chairman. And thank you very much for holding this hearing today, and I appreciate our witnesses for being here today.

Within the last three decades, we have entered a digital age of communications and witnessed the emergence of multimodal competition and a dynamic Internet ecosystem that is replacing the public switched telephone network and time-division multiplex technologies with Internet Protocol-based platforms.

As we continue to see the convergence in evolution of our telecommunications marketplace, the future of regulations is a topic that must be addressed so that it does not thwart future investment, innovation, or economic growth. We need to ensure that current laws and regulations reflect the technologies and competitive dynamics of today's marketplace, while protecting consumers' ability to access the communications services of their choice and safeguarding the reliability and security of those services.

I would also ask to submit this chart, Mr. Chairman, for the record, showing the declining share of U.S. households with the ILECs switched landline service as their primary line service over the last 10 years. Look forward to hearing from our witnesses today, and I yield back.

[The prepared statement of Mr. Latta follows:]

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Mr. Walden. And, without objection, the chart you reference will be submitted for the record.

[The chart follows:]

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Mr. Walden. We now turn to my friend and colleague from California Ms. Eshoo for an opening statement.

Ms. Eshoo. Thank you, Mr. Chairman. And welcome to all of the witnesses and packed hearing room.

Seventeen years ago, the 1996 act stated its intention, quote, "to promote competition and encourage the rapid development or deployment of new telecommunication technologies." In the years that have followed, hundreds of new entrants have emerged, and with their creativity and ingenuity, billions of dollars have been invested, and thousands of new jobs have been created. So there have been a lot of good things that have come from that.

As the title of today's hearing suggests, an evolution -- and I underscore the word "evolution" -- in wired communication networks is under way, creating new ways of delivering a familiar service, a phone call. For over a decade communications companies have been making the transition to IP. And so I think it is incumbent upon all of us here to decide why we would remove rules that have helped pave the way for greater competition and innovation in the marketplace, and it is a worthy examination.

Changes in technology and infrastructure do not alter the national goals that have always guided our communications policies. As Commissioner Rosenworcel and Public Knowledge have both articulated, our conversation should begin by laying out the core values or principles that will guide the transition to all IP voice networks.

Fundamentally the FCC must ensure universal service to all Americans and the rules of the road for competition, as well as strong consumer protections and access to 911. Consumers and businesses have to have confidence in the reliability and the functionality of these services, particularly during times of emergency. And I am sure it is an area that we are going to hear about and concentrate on today.

The reality is is that consumers don't consider whether a phone call is delivered through a traditional switched network or via IP. They just expect their phone call to connect as it always has.

We all support investments that enable companies to offer their consumers new and innovative services and do so more efficiently and reliably, but changes in technology don't automatically -- don't automatically -- make markets more competitive. I look forward to our witnesses' perspectives on how we can ensure that the IP transition results in more competitive choices.

And finally it is important that the investment in job creation -- to remember that the investments in job creation do not come from just two or three companies, but rather an ecosystem, and we are blessed to have that in our country, that includes hundreds of communications companies both small, medium, and large. Earlier this year a study found that updated procompetition policies would simulate the hiring of up to 650,000

new employees in the telecom sector over the next 5 years and $184 billion of private funds into U.S. telecommunications networks.

So, Mr. Chairman, the topic of today's hearing raises -- first of all, it is an important topic. It also raises important questions that it is our responsibility to have thoroughly answered. As the migration to all-IP networks continues, the testimony of our witnesses -- and we have a sterling panel here today -- will help ensure that our laws and regulations promote new investment, competition and consumer choice.

And I would like to ask unanimous consent, Mr. Chairman, that this letter from the Competitive Carriers Association reiterating the importance of long-standing, tech-neutral interconnection requirements be submitted for the record.

Mr. Walden. Without objection.

[The letter follows:]

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Ms. Eshoo. Thank you. And I yield back.

[The prepared statement of Ms. Eshoo follows:]

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Mr. Walden. Gentlelady yields back the balance of her time. The chair now recognizes the vice chair of the full committee, the gentlelady from Tennessee Mrs. Blackburn.

Mrs. Blackburn. Thank you, Mr. Chairman. And I want to thank you for holding this hearing. It is important. It is timely. And we want to welcome our witnesses. And thank you for being here.

As you have heard, each of us talk about competition and looking at how that has changed in the communications marketplace. And today we have that intermodal competition among the ILECs, the CLECs, the VoIP, cable, satellite, others. But these competitive services are subject to different rules based on outdated assumptions. And I think that it is not easy for regulators in the Federal Government and here in D.C. to change how they think about the treatment toward communications in today's marketplace. And I -- I do feel that it is our responsibility to look at how we create the appropriate environment, put some regulatory certainty in place, and then encourage that private capital and investment and focus on creating jobs.

There are three things that I want to drill down on a little bit on today with you all. Number one, is it fair to tell someone who wants to invest in tomorrow's technology that they need to slow down in order to maintain an old network that they don't want to invest in anymore? Number two, does it still make sense for the old rotary-dial regulatory model -- and, yes, some of us do

remember that model -- to hold back the communications revolution that is before us now? And, number three, how can we make the transition to the Internet Protocol as seamless and dependable as possible? Those are questions worthy of discussion.

I thank you all for your time, and at this time I will yield to any other Member -- I do not have anyone in the queue.

[The prepared statement of Mrs. Blackburn follows:]

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Mr. Walden. Anyone else on the Republican side want to make any comments? If not, the gentlelady yields back.

Now recognize my friend, the gentleman from California Mr. Waxman, for 5 minutes.

Mr. Waxman. Thank you very much, Mr. Chairman.

Since the days of a black rotary phone, Americans have been able to count on the phone network to call friends and family, conduct business, and reach emergency services when needed. Today, thanks to innovation and competition, consumers can connect to the phone network in more ways than ever before, but when we pick up a wireless smartphone or dial a number over Voice over Internet Protocol service, few of us pause to consider the technology involved. We simply expect our phone calls to go through.

The ongoing transition from traditional circuit-switched networks, the Internet Protocol or IP-based networks is the technical backdrop for today's hearing, but our phone network is more than a system of wires, switches, and technical protocols. It is an essential part of the social and economic fabric of the United States. As we consider this next network evolution, we must continue to protect the core values that have guided our communications policy for nearly a century. Many of today's witnesses have articulated some version of these values, and there is widespread agreement on these principles.

Our commitment to universal service is a recognition that all

of us benefit when everyone is connected. We protect competition because it is the most efficient way to generate new products and lower prices, with the added benefits of limiting regulation. We have rules for consumer protection, because the marketplace needs oversight to ensure that services like 911 are provided even if the market is not yet demanding them. This is a mandate Congress has entrusted to the FCC, and it does not change with new generation of technology.

I think we all recognize the transition to IP-based networks is already happening, and this is a good thing. The transition means more investment and opportunities for economic growth and new services that can improve everything from healthcare delivery to energy efficiency. The challenge we face is how to manage this transition in a way that does not disrupt businesses and consumers that rely on traditional services today.

I agree with Mr. Cicconi that we need the FCC as an expert agency to help guide the evolution to an all-IP network, but I caution against using the advent of IP-based services as a vehicle to try to undermine the FCC's authority to preserve competition and protect the public. Whether addressing complaints about rural call completion or ensuring network reliability during disasters, we need the FCC to address the impacts of the IP transition. A vibrant and vital FCC is critical to ensuring that the transition ultimately achieves the goal we all share, which is a world-class network that delivers greater benefits for consumers and our

economy.

And I thank Chairman Walden for holding this important hearing and working with us to assemble a balanced panel.

Mr. Chairman, I would like to ask unanimous consent to enter into the record a paper by Professor Kevin Werbach, titled "No Dial Tone: The End of the Public-Switched Telephone Network."

Mr. Walden. Without objection.

[The article follows:]

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Mr. Waxman. And, Mr. Chairman, I wish at this time to yield the balance of my time to the gentleman from Vermont Mr. Welch.

[The prepared statement of Mr. Waxman follows:]

******** COMMITTEE INSERT ********

Mr. Welch. Thank you very much.

I have the privilege of introducing John Burke, a Vermonter from Castleton, Vermont, graduate of Dartmouth College, and 12-year member of the Public Service Board, which is our public utility commission. And John has served on the Committee on Telecommunications with the National Association of Rural Utility Commissioners, and one of the things that he is so good at is talking about the impact on rural areas of telecom policies. And Congressman Latta and I, as you know, started a Rural Caucus to try take a specific look at how the policies that we have to implement are going to be affecting rural areas, and there is no person with more experience and wiser counsel than the person that we are going to hear from, John Burke from the great town of Castleton, Vermont. Thank you, John.

Thank you, Mr. Chairman. I yield back.

Mr. Walden. The gentleman yields back his time, and the gentleman from California yields back the balance of his time. So now we are ready to move forward with our distinguished panel of witnesses.

We thank you all for your testimony. It is most enlightening, even if there is a little conflict here and there among you, which is why you are all here.

So with that, we will start off with Jim Cicconi, who is the senior executive vice president for external and legislative affairs for AT&T. Mr. Cicconi, thank you for being with us. And

we look forward to hearing your comments.

STATEMENTS OF JIM CICCONI, SENIOR EXECUTIVE VICE PRESIDENT, EXTERNAL AND LEGISLATIVE AFFAIRS, AT&T; MARK IANNUZZI, PRESIDENT, TELNET WORLDWIDE; HAROLD FELD, SENIOR VICE PRESIDENT, PUBLIC KNOWLEDGE; JOHN BURKE, BOARD MEMBER, PUBLIC SERVICE BOARD, STATE OF VERMONT; AND RANDY MAY, PRESIDENT AND FOUNDER, FREE STATE FOUNDATION

STATEMENT OF JIM CICCONI

Mr. Cicconi. Thank you, Chairman.

Mr. Walden. And we are still on an old wired copper network, so if you could turn on that microphone.

Mr. Cicconi. Boy, that is embarrassing.

Anyway, Chairman Walden, Ranking Member Eshoo, distinguished members of the subcommittee, thanks for the opportunity to testify with you today, and thank you for holding this hearing.

Four years ago, as you know, the FCC issued the National Broadband Plan, as directed by you. That plan concluded that bringing modern broadband services to all Americans is vital, and that to do so we must have communications policies rooted in the future, not the past.

In my testimony today, I want to focus on four key points concerning this very important IP transformation. First, transition to all-IP networks is happening today, and I think the

chart that you have up here demonstrates that. That is over a 10-year period, and the smallest part of that at the end of that is --

Ms. Eshoo. Is that chart for you to see or for us to see?

Mr. Cicconi. Well, I had hoped that the committee would have it, but --

Mr. Walden. We got it covered. Go ahead.

Mr. Cicconi. And this is based on government data. But it shows that by the end of this year, only about 25 percent of Americans will actually be taking advantage of the legacy wireline services. Three-quarters of Americans would have moved to alternatives. The National Broadband Plan, I think, recognizes that this IP transition is well under way. It is happening today. And I posit that all my fellow panelists recognize this as well.

Communications marketplace has changed dramatically, and so has my company in response to that. Today we provide broadband and communications services in robustly competitive markets where consumers have an almost overwhelming array of choices. And, believe me, they exercise those choices on a daily basis. They, consumers and businesses, are abandoning the old circuit-switched wireline network in droves and are moving to IP and mobile services offered by a host of different providers. In fact, it is estimated that what we lovingly call POTS, which is "plain old telephone services," as I mentioned earlier and the chart demonstrates, would be confined to only 25 percent of U.S.

households. In fact, in Florida and Michigan, two States that are in our wireline footprint, only about 15 percent of homes are still connected to the legacy wireline network today.

Second point: This transition to an all-IP network is a good thing, and it should be embraced. This is a huge and crucial undertaking for our country. We are replacing the networks that served us well for 100 years with far more advanced and capable networks, networks he hope will serve us well for the next 100 years.

National Broadband Plan correctly concluded that these new smart networks are vital to our Nation's economic development and to maintaining our global competitiveness, but these networks don't happen by themselves. They have to be built, and to build them companies need the right incentives to invest. Most important, companies must be able to retire old infrastructure in order to make the investments in new infrastructure, just like any other business would do. To do otherwise makes little sense and would impede what the National Broadband Plan rightly has made a national imperative.

Third point: We have the time to do this right. This is not a flash cut. The transition to all-IP networks will take place over the course of this decade, but we have to use that time wisely. The FCC's Technical Advisory Committee suggested that the old legacy networks be retired by 2018, but the FCC should in any event set a date certain for their retirement. My company

believes it will actually take us until 2020 to accomplish that, and even then it will require a maximum effort to our part.

In the meantime, we have asked the FCC to conduct industrywide trials. In our case, we suggested converting two pilot wire centers out of some 4,700 wire centers in our footprint to all-IP. We feel trials are critical. As careful as our planning is, no one can anticipate every issue that may arise when we actually transition off the legacy wireline infrastructure. Trials will help us learn while we still have a safety net in place, and as we learn, all of us, industry, government, customers, and stakeholders, can then work together over the coming years to address any problems we find.

This leads to my final point, which is the importance of an overall framework of values and principles to guide us during this transition to all-IP networks. In that regard some of our friends in the public interest community, including one of my colleagues on the panel here today, have, I think, served us very well. They have stressed that this transition from the old to the new should consider things we have all come to see as fundamental: universal connectivity, consumer protection, reliability, public safety, interconnection.

We know that an all-IP world will not be a regulatory-free zone, nor are we seeking that, but we do feel that any regulation should be rooted in the problems of today, not the problems of a bygone era.

Regulations should also recognize and give deference to the choices of consumers in what are now highly competitive markets and treat all providers equally regardless of technology or their company's lineage.

This is not the first time the U.S. has helped plan for that communications transition. As noted by the National Broadband Plan, we will need wise government policies to ensure that legacy regulations do not impede the investments our country needs, and that the interests of consumers are protected as these new technologies are deployed.

Thank you again for holding this hearing today, and I will look forward to your questions.

Mr. Walden. Mr. Cicconi, thank you for your testimony. We appreciate your participation in the hearing.

[The prepared statement of Mr. Cicconi follows:]

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Mr. Walden. We will now go to Mark Iannuzzi, who is president of TelNet Worldwide. We are thankful that you are here today to represent the industry and yourself. And please turn on that microphone, pull it up close, and we will look forward to your comments as well, sir. Thank you for joining us.

STATEMENT OF MARK IANNUZZI

Mr. Iannuzzi. Chairman Walden, Chairman Upton, Ranking Member Eshoo, Ranking Member Waxman, and to each of the members of the committee, thank you very much for an opportunity to speak to you today. I am Mark Iannuzzi. I am president and founder of TelNet Worldwide. We are a competitive facilities-based carrier providing telecommunications and broadband services. We are headquartered in Troy, Michigan. We are also very privileged and proud to be the communications service provider to Chairman Upton's district offices in Kalamazoo and St. Joseph/Benton Harbor, Michigan.

TelNet offers the complete range of essential communications services for small to middle-size businesses, including classic voice, IP telephony, hosted IP applications, and advanced data and networking services. In this increasingly connected world, we help unify and simplify all the ways that businesses communicate and collaborate, providing them big-business solutions to small businesses at prices that they can afford.

Today I am pleased to appear on behalf of COMPTEL. It is the Competitive Communications Association. Nearly two-thirds of the COMPTEL members are small and middle-size businesses, a majority of which have $10 million or less in revenues and fewer than 100 employees. However, the DNA of these companies is about entrepreneurs serving entrepreneurs.

A little background about myself. I was born and raised in Detroit. I am an American engineer and entrepreneur. I built TelNet with my brothers 15 years ago from the dirt out of the basement of our home. To this day, though, however, since that time, we have invested upward of $100 million, employing now over 100 career associates in our company, and we also are very proud to have created the first network in the State of Michigan which integrates the vast majority of the State with a service area greater than AT&T and Frontier combined.

One of the things that is indelible upon me was a conversation I had with my father when I was about 5 years old when I had to do a book report on poverty. I asked my father, "What is poverty?" And my father paused, and he told me it is -- "Poverty is about persons without choice." Now, at 10 years old, I didn't quite grasp what that meant because I thought it was all about not having a lot of money. But it was his pride of being an Italian immigrant, a U.S. citizen, to be a part of this great land of opportunity, that he had choice for himself and our family.

So with that as a backdrop, I want to make it clear that as we have these debates, I or the competitive community, we are not against AT&T, we are not against the ILECs. AT&T is a proud American company. We want all companies to do well. It is in our interests. When they raise themselves, they raise the entire industry, and we have the ability to serve customers better. So it is not about what we are against; it is about what we are for.

We are for robust competition, for merit over might, for much as things change in this technological age, some things never change, one of which is the enduring truth of free-functioning, competitive markets to bring about the greatest good for the widest array of people the world has ever seen.

We are for the rule of law, which means trust. It means certainty in keeping our collective promises, including those to the capital markets which have invested theirselves in our endeavors.

And, finally, we are for ensuring that there are no artificial barriers to progress not only for those of us who are currently in the market today, but for all those who are yet to be born who will take up the mantle that we have set forth.

So let us begin from the -- let us start at the beginning, the 1996 act. The 1996 act unleashed the greatest advancements in communication history since the history of history. Improvements to our capabilities today in terms of the capabilities, the competitive position and the productivity in this country are

mind-boggling. And to that extent, I would like to extend my sincere salute to Chairman Upton, to Congressman Dingell and all the Members here who were participatory any that '96 act because your leadership was instrumental in forging a bipartisan team for this landmark legislation which has revolutionized the industry of communications.

At the very soul of that act, the very soul was designed specifically to open up competition, including the ability for the incumbent dominant companies to expand their service offerings, and they have done very well. They entered the LD market and ultimately the Baby Bells bought Ma Bell.

Now, there are some here that would say that there are technical limitations in the act. I say to them as I say to you, the act is not and cannot be about technological limitations. It is rather about technology inspiration through a simple framework for free-functioning, competitive markets to exist.

Why this matters. We understand small businesses, I believe, and that is why TelNet came into being. This is where we thrive. Small businesses seek to be relevant in what they do, not necessarily experts in technology. Small businesses cannot afford to go out and pay for the consultants to sort out the alphabet soup of technology. Rather, it is often where it is their next-door neighbor's nephew's cousin that comes in and tries to help them figure out some of the things going on here.

The competitive industry can touch these small businesses.

We sit across the table, we examine their needs, we establish solutions tailored to those needs and help them go from crawl, walking, to run. You know, God bless them, but this is not the AT&T's forte. Our goal, in fact our promise, to our customer is to be the last service provider that they ever need, because we want them for life. We do -- to do this, we must ensure that we can futureproof their investments and deliver ongoing value.

So let us get to the heart of the matter. There are three things that are key to what this conversation here about the next-generation networks. The last mile is the essential business building block for function and competitive markets, regardless of technology. Our network is the best in the world, but it is only at good as its weakest link, and that is last mile.

It is -- secondly, it is important that these networks are interconnected, that we can exchange traffic at just and reasonable rates and our terms and conditions regardless of technology.

And, third, we need to make sure that the business agreements and pricing between the dominant and competitive pair are negotiated and adjudicated with the firewall backstop of our local public utilities commissions.

Mr. Walden. Mr. Iannuzzi, I am going to have you wrap up. You are about 2-1/2 minutes over.

Mr. Iannuzzi. Thank you.

In conclusion, I came into this business 15 years ago with a

driving desire to make things better, to make things less expensive through business process improvement and technology advancement. If I ever had any doubt that there was a -- going to be a technological limitation in a tech business, that would have been a nonstarter.

The TelNets of the world may come and go, but should never -- must never perish from this great Nation is that we do not erect barriers which impoverish, but we stay true to our competitive spirit as Americans for those ingredients that promote prosperity and well-being for all.

Thank you very much for the opportunity to testify today.

Mr. Walden. Mr. Iannuzzi, thank you for your comments, and we appreciate your testimony.

[The prepared statement of Mr. Iannuzzi follows:]

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Mr. Walden. We will go now to Harold Feld, who is the senior vice president of Public Knowledge. We welcome you back before our subcommittee, and we look forward to your summary of your testimony as well. Mr. Feld, go ahead.

STATEMENT OF HAROLD FELD

Mr. Feld. Thank you. Chairman Walden, Ranking Member Eshoo, thank you for inviting me to testify today.

The transition of our wireline networks to Internet Protocol-based services is a tremendous opportunity for our Nation, but we must make sure the transition results in an actual upgrade in technology without a downgrade in the services upon which Americans depend.

For decades our country has used the reasonable rules based on fundamental principles to build a phone network that became the envy of the world. We are the country that brought a phone to every farm, the country that built a network you count on. We accomplished this by moving certain fundamental values with us as our networks evolved. As we now face the opportunities and challenges of implementing the next generation of communications technology, we must continue to leave no one behind.

Americans are so used to relying on the protections of the phone network, they often don't even notice them. We conduct our business and personal communications as if we can always trust the

phone network will just work, because it has. During emergencies we can always call for help from police, firefighters and hospitals. When someone calls a friend on another phone network, that call will always go through, regardless of which carriers they subscribe to or where they live.

In the rare instance that any part of the system breaks down, government authorities at the local, State, and Federal levels move swiftly to act as if our lives depended on it, because they do.

Every one of these benefits is the result of deliberate policy choices that serve specific basic values. Our phone network became the envy of the world because our policymakers valued what Public Knowledge calls the five fundamental principles: One, service to all Americans; two, competition and interconnection; three, consumer protection; four, network reliability; and, five, public safety.

There are some who believe the IP transition should be a glidepath to eliminate FCC oversight, but as carriers begin the transition, we have concrete examples that many of the essential services we take for granted are at risk in rural and not so rural areas, for individuals and for small businesses. One of the worst problems is the continuing inability of rural residents to receive telephone calls reliably. As carriers switch to IP technology, they can route calls through least-cost router systems, creating latency, and sometimes trapping calls in perpetual loops. In a

world where we simply allow the marketplace to work, this doesn't get fixed. As one carrier told the complaining subscriber, due to living in a rural area, you will experience service issues.

The FCC will address this at the open meeting next Monday, but in a world where the FCC could only regulate based on market power or in response to unfair or deceptive practices, as some have urged, rural America would be out of luck.

Which brings me to my larger point: IP technology brings the potential for new services, but it also brings the potential for new ways to crash the system. IP doesn't work with a lot of legacy equipment or services. It brings in all of the cybersecurity issues, like malware and cyber attacks, without any of the existing defenses. I am not alone in worrying that things could go very wrong. The Department of Defense and the Federal Aviation Administration have both filed with the FCC to express concerns that the IP transition, if not handled properly, could interfere with vital government operations.

As with rural call completion, we may find we actually need the FCC to use its legacy authority to solve these problems. Rather than thinking of the FCC as an obstacle that stands in the way, we should think of it as our last defense against the total train wreck, because at the end of the day, the measure of success for the transition will not be how many regulations did you kill, but does the phone network still work for everyone.

For all these reasons, I am very glad to hear Jim Cicconi

acknowledge the importance of doing this right, of avoiding any kind of flash cut that could cause major disruption, and for acknowledging this will not be a regulatory-free zone. To everyone's surprise, Public Knowledge and AT&T agree on a lot because we want the same thing: a competitive, modern network for all Americans. Unfortunately we still debate this as if we were for or against upgrading our phone system or even for or against AT&T.

This is absurd. We want AT&T and every other carrier to invest in its network. No one is seriously suggesting that AT&T or any other carrier should preserve copper to the end of time. While we will fiercely disagree on how to make this work, we all want to make this work, and we know that the stakes are high.

Most importantly, we need to stop thinking of this as AT&T's transition, where AT&T proposes something, and everyone else reacts. We need to plan out a transition that reflects our values. This is the transition of the phone system of the United States of America on which 300 million people depend every single day. We need to recognize we all have a shared benefit from making this network reach everyone, and therefore a shared responsibility to make it work for everyone.

Thank you.

Mr. Walden. Thank you, Mr. Feld.

[The prepared statement of Mr. Feld follows:]

******** INSERT 1-3 ********

Mr. Walden. Maybe we can create a government Web site they could all work through. Never mind. Just kidding.

Mr. Feld. We all learn from our mistakes.

Mr. Walden. Yes, hopefully.

We go now to Mr. John Burke, who is back before our subcommittee. We appreciate your participation. He is a Board member and Public Service Board of the State of Vermont.
Mr. Burke, we are delighted to have you here again, and thanks for your testimony. And please go ahead.

STATEMENT OF JOHN D. BURKE

Mr. Burke. Thank you, Mr. Chairman, and Ranking Member Eshoo, and members of the subcommittee. Thank you for allowing me to testify on the topic of IP transition.

In recent months, under Acting Chairwoman Clyburn, the FCC has greatly increased its interaction with the States. We are particularly pleased with the outreach from the internal FCC task force to NARUC's own Federalism Task Force. Chairwoman Clyburn is to applauded for her leadership and for her outreach.

In my home State of the Vermont, we face many challenges. Very little fiber is being deployed to the home, and there are many areas without broadband access. There is limited competition even in urban areas. Wireless coverage leaves much to be desired even where it exists. And yet, even in Vermont, transition to the IP-based voice network is occurring. In this latest evolution, which has been under way for quite a few years now, networks are migrating away from circuit-switched voice and data services to IP-based services.

During the transition, like the previous ones, it is crucial for policymakers to focus on the right issues. No regulator or legislator should intervene in the market to put a thumb on the scale in favor of one technology over another. The market should make those choices.

The reason public service commissions and agencies like the FCC were created and regulate remains the same. First, we regulate where competition is not vigorous enough to adequately protect consumers. Secondly, we intervene to impose public-interest obligations.

Regardless of the level of competition, some oversight will always be necessary to provide what the market will not, including consumer protection, local number portability, interconnection, prioritization of service restoration, 911 service, disabled access, and universal service.

The AT&T requests for the wire center trials raises some questions of why trials are needed now. The AT&T -- AT&T and other providers have no significant problems rolling out IP-based service today. The transition is well under way, and major reason why issues remain is because the FCC has focused on the wrong issues.

The transition is not about regulation or deregulation. The FCC has ample tools in the 1996 act to eliminate unneeded regulation. Nor should the debate be technology-focused. Congress established a technology-neutral framework in the 1996 act and incorporated the core values of consumer protection, universal service, and competition. The FCC should just follow this framework, but for over 10 years the agency has followed what Congress has set out, but not in exact terms. Instead the agency has been unable, under both Democratic and Republican Chairmen, to

provide needed certainty by classifying VoIP services either as a telecommunications service or as an information service, which has undermined the communications market.

Leaving this question unresolved has created the regulatory arbitrage that undermined intercarrier compensation system and is at the reason and the very base for the call-completion problems Mr. Feld mentioned. It has also left some consumers who chose IP-based services with fewer protections than they might have had with the circuit-switched service, despite voice services being exactly the same from a consumer's point of view.

The States and industries stakeholders continue to waste significant resources at ultimate expense of taxpayers and ratepayers on proceedings that would be unnecessary if the FCC acted.

The FCC-blessed real-world VoIP interconnection trials will not necessarily help the Commission clarify the statutory basis for the incumbent LEC's duty to provide VoIP interconnection. The clarification begins and ends with an interpretation of the States -- of the statute.

There is no question that the interconnection is technically feasible. AT&T and Verizon manage that on a daily basis on their own networks. Rather than inventing new legal theories with no statutory support specifically to avoid classifying VoIP telephony, as the FCC did in the November 2011 transformation order, the agency should just classify the service.

Oversight of VoIP services has absolutely nothing to do with either the Internet or peering arrangements. Verizon and AT&T assure their customers that their VoIP services are not Internet services on their Web sites daily.

If the FCC continues along to consider technology trials, Congress should encourage the agency to first seek the benefit of a fact-based recommendation from an adequately funded Federal-State-USF joint board. Any proposed trials can only benefit from the significant State involvement.

In conclusion, while technologies change, the expectations of our consumers do not. Consumers expect the same level of service and protections they have been accustomed to, and it is up to us all to ensure that those expectations continue to be met.

Thank you for your attention. I look forward to your questions.

Mr. Walden. Thank you very much, Mr. Burke. We appreciate your counsel today.

[The prepared statement of Mr. Burke follows:]

******** INSERT 1-4 ********

Mr. Walden. We will go now to our final witness on this panel, Mr. Randolph May, who is president and founder of Free State Foundation. Mr. May, it is good to have you back, and we look forward to your comments as well.

STATEMENT OF RANDOLPH J. MAY

Mr. May. Chairman Walden, Ranking Member Eshoo, and distinguished members of the committee, thank you for inviting me to testify. I am president of Free State Foundation, a nonpartisan, free-market-oriented think tank that focuses its work primarily in the communications policy area. I have been involved for 35 years in communications policy in various capacities, including having served as Associate General Counsel at the FCC.

I appreciated the opportunity to testify in July before this committee regarding FCC process reform. That hearing was very important, but, frankly, the topic at this hearing may be even more important. As the transition away from narrowband communications services to digital broadband services continues, the fundamental question confronting policymakers is this: Will the existing public-utility-style framework that still largely governs communication service providers be replaced by a free-market-oriented paradigm that accelerates the ongoing broadband digital transition; or, instead, will the regulatory framework be an impediment to progress?

The answer has important implications for the Nation's economic and social well-being because there is widespread agreement that the transition to IP services, which indisputably is leading to dramatic marketplace changes, will be completed at some point. And there is also widespread agreement that completion of the transition is a positive good, because IP-based services provide consumers with more functionalities in less costly ways than do copper-based TDM services.

There is no doubt that the digital revolution has enabled increasing competition among broadband providers for the provision of voice, high-speed data, and video services, whether these providers offer their services over wireline, cable, wireless, satellite, fiber, or whatever technology. The relevant point is not that all of the services offered by all of the competitors are perfectly substitutable, or that they meet every consumer's desire at all times. The relevant point for policymakers is that for an increasingly large number of consumers, these various competitors provide a choice of service providers offering a choice of attractive service options.

Note that I said above the IP transition almost certainly will be completed at some point in time, but the FCC's actions, and possibly Congress's, too, will affect the timing of the transition's completion and whether the regulatory regime that emerges is a proper one going forward.

My testimony explains why, in order to benefit consumers and

in order to promote investment in new networks and innovation, the legacy regulatory framework, which is based on assumptions of a monopolistic marketplace that no longer exists, should be replaced in a timely fashion by a free-market-oriented model. Requiring telecom companies to continue to maintain their TDM networks past when they are economically viable drains investment dollars from deployment for new IP networks, and economists agree that burdening any service provider, regardless of the platform used, with unnecessary costly regulation does deter investment and innovation. So the in the IP world, the FCC's regulatory intervention should be tied closely to findings of market failure and consumer harm.

The FCC may well possess the authority under the Communications Act to implement most of the regulatory changes necessary to facilitate completion of the digital transition, while at the same time safeguarding certain basic public safety and universal service interests, which I recognize are important interests to be safeguarded, but to the extent such authority either is lacking, or the FCC fails to properly exercise such authority in a timely fashion, then Congress should be ready to step in.

For example, Congressman Latta's recently introduced bill, H.R. 2649, which requires the FCC to presume forbearance relief should be granted absent clear and convincing evidence to the contrary, would be a useful tool in enabling the agency to act

more quickly, especially if forbearance relief is made available for all entities subject to the Commission's jurisdiction, as I think it should be.

In any event, aside from any near-term legislation that may be desirable to ensure the benefits resulting from the digital revolution are fully realized, ultimately Congress should adopt a comprehensive overhaul of the current Communications Act along the lines of the Digital Age Communications Act model that I have long advocated, and which I describe in my testimony.

Finally, Mr. Chairman, I mentioned I served as Associate General Counsel at the FCC. That was in the late 1970s and early 1980s under the Carter administration. At that time traditional economic regulation of the various transportation markets was largely eliminated, and this deregulation initiated by President Carter's administration was accomplished on a mostly bipartisan basis, and the Congress and the agencies cooperated productively. The agencies generally initiated deregulatory changes through the administrative process, while Congress engaged in oversight. And Congress eventually legislated to put in place deregulatory regimes that relied for the most part on marketplace competition rather than regulation to protect consumers. I believe that a similar opportunity for positive change now exists.

Again, thank you for inviting me to testify today, and I will be pleased to answer your questions.

Mr. Walden. Mr. May, thank you. And thanks for your

in-depth testimony, which we all have.

[The prepared statement of Mr. May follows:]

******** INSERT 1-5 ********

Mr. Walden. I am going to start off with questions. And I -- Mr. Iannuzzi, in your testimony, you said, and I quote, the prepared testimony, "As incumbents replace their legacy TDM-based technology with IP technology, competitive carriers will lose access to the last-mile connections that have enabled them to push deployment of innovative business broadband services to American businesses." That is kind of the crux of the argument you represent today, correct, that if they abandon -- if AT&T or other companies abandon their copper networks, then you are not going to have the ability to get to that last mile, correct?

Mr. Iannuzzi. Correct.

Mr. Walden. Now, Mr. Cicconi, from your perspective, what does that mean in terms of -- is that accurate? Will you -- will AT&T and other companies still make last-mile connection available? And then I want to go to Mr. May on this as well.

And again, hit that microphone button, if you would.

Mr. Cicconi. Short answer is of course we would make them available, and there is nothing we have proposed that would take that away.

Mr. Walden. Under the same interconnection, reasonable rates, terms and conditions?

Mr. Cicconi. I think if we are talking about copper loops, you know, there is nothing in our proposal that would change the treatment of that as a "uni."

Mr. Walden. But in terms of an advanced network, fiber?

Mr. Cicconi. I think when you are talking about, you know, Ethernet, for example, the FCC has concluded the Ethernet is a competitive service. So I think if we are rolling out Ethernet services in replacement for TDM facilities -- you know, and to give you the sense of that, a TDM facility is not classed as a broadband-level facility by the FCC currently. So for placing TDM with a broadband facility, for example, and backhaul to a cell tower, you know, I think the FCC has concluded Ethernet is, in fact, very competitive.

And I think, you know -- in fact, I think Sprint CTO just stated recently that for the same price he pays for a T-1 to a cell tower, he can get 20 times the capacity by running Ethernet to the same cell tower. And so -- so, obviously, if it is a competitive market, we wouldn't -- we wouldn't feel that regulation, per se, is needed in that area in order to provide an alternative capacity.

Mr. Walden. All right. Mr. Burke, what is your reaction to all of that?

Mr. Burke. Well, I think that one of the things you look at when you look at the potential for interconnection is that there are supposed to be agreements. The idea is that they are supposed to agree. That doesn't necessarily mean that all the players have an equal bargaining power. It doesn't always work that way. If that is the case, it may well be necessary for somebody to take a look at those agreements. And the 1996 act clearly said, and

wisely so, in my estimation, the States can look at that and arbitrate that. And it also defined the service to include advanced services.

So 1996 actually had -- in my estimation, had it right and gave a methodology so you would be able to handle arbitration of these issues if, in fact, Mr. Cicconi and Mark couldn't agree. And I think that is another point that exists in the States' position here and what they would have to do in this brave new world moving forward.

Mr. Walden. All right. Mr. May, from your perspective?

Mr. May. Thank you, Mr. Chairman.

I think part of the premise of your question was based on the continuation of offering of copper-based loops from Mr. Iannuzzi.

Mr. Walden. Well, and just the ability, regardless of the underlying infrastructure, to have a competitive marketplace for these alternative competitors.

Mr. May. Right. The -- you know, there is a transition going on, which is why you called the hearing.

Mr. Walden. Right.

Mr. May. You know, from my perspective, over time, as I said in my oral testimony, it is important that we not require the maintenance by regulatory fiat of older technologies that are less efficient and more costly. So eventually -- I am not in favor of requiring AT&T or anyone else to maintain in existence a technology in a competitive environment that we are moving to that

is not efficient.

But I want to say one other thing, if I could. In Mr. Iannuzzi's testimony, he is talking both about the ability to access facilities of others and to use those last-mile facilities, and he is also talking about interconnection of facilities. And as we talk about this today, those are really -- they are actually two different things. In 251 and 252, without getting too technical, they involve both of those things. And, from my perspective, in terms of where public policy wants to go, I am much -- I am more receptive to arguments that have some regulatory backstop for interconnection, saying, you know, I have to interconnect my network with Mr. Burke's network or Mr. Cicconi's, than I am about regulation which continues to require that if I build a facility, that I have to provide access under regulated terms and prices, you know, ad infinitum for someone else to use those facilities.

And the simple reason, and this is important, I think, to understand, is when you -- when you require that type of sharing of facilities and access that he talks about, and he -- he does say he has some facilities of his own, but --

Mr. Walden. Right.

Mr. May. -- when you do that, it discourages either him from building his own facilities, or it discourages me, if I am the one that has to provide access, from actually investing more to build more facilities.

Mr. Walden. All right. My time has expired. And I now turn to the gentlelady from California Ms. Eshoo for 5 minutes.

Ms. Eshoo. Thank you, Mr. Chairman. And thank you to all the witnesses.

We will start over here with the Italian part of the table, who don't agree with each other despite their shared background ethnically.

Mr. Cicconi, you stated in your testimony that modern IP networks are both more dynamic and cost-efficient than the TDM-based voice telephone networks that we have depended on over the last century.

How does a new network technology change the state of competition? Because I think that that really goes to the heart of a lot of what we are talking about here and some of the testimony that we have heard from others.

In your view, shouldn't the -- the rules to preserve and promote competition be technology neutral? I mean, I have always favored technology being neutral in whatever legislation we do. It has always been something that I thought was like a hot stove; don't go and touch it. It should be neutral.

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DCMN CRYSTAL

[11:32 a.m.]

Mr. Cicconi. Well, first of all, I don't think the Telecom Act itself makes the rules technology neutral. It put most of those rules in Title 2, which is entitled common carriage, and it doesn't apply to our wireless service. In fact, you have an expressed provision in Title 3 that it can't be applied to wireless service. It doesn't apply to cable. It applies uniquely to the wireline TDM services provided by a legacy wireline carrier.

So they are not technology neutral in that sense. They are uniquely imposed on this part of the business. And as you saw from the chart earlier, it is a declining part of the business. At the current time AT&T has fewer than 14 million customers using traditional wireline services. By contrast, the number four wireless carrier has double that.

So I would argue that today these services are competitive, Congresswoman, and that you all when you wrote the act -- or rewrote the act -- in 1996 I think did something fairly unique. I think you recognized in there that there were major transformations that were underway and that I think augured well for competition, and you gave the FCC some fairly unique powers there --

Ms. Eshoo. So are you agreeing that the rules going forward should promote competition, but you don't agree they should be technology neutral?

Mr. Cicconi. I certainly would argue that it is an appropriate mission for the FCC to continue doing, but I would disagree that all the rules that were needed in 1996 and 1934 --

Ms. Eshoo. We are not in my office. I have to get to Mr. Iannuzzi, okay? Thank you.

Mr. Iannuzzi, you gave great testimony. I loved what you said. And it is uncommon for people to come here and speak about what their father said, how that remained with you, what you do, what you are for. It is not what you are against, but where you want to go and why. And I just think you gave terrific testimony.

Without a regulatory backstop, what incentive do you think that the largest incumbent providers have to reach a commercial interconnection agreement with you?

Mr. Iannuzzi. Thank you very much, Congresswoman, for your kind remarks.

Ms. Eshoo. Turn the microphone on so everybody can hear you say, thank you for your kind words, Congresswoman.

Mr. Iannuzzi. When I got my CLEC license they asked me three questions. One was do you have the technical acumen, do you have the financial wherewithal, do you have the business know-how. I would have flunked that test if I was going to go into a business to compete against an 800-pound gorilla without some type of

firewall, some type of framework that allowed a competitive marketplace to exist. Because our ability to go and negotiate a commercial agreement, the incentives, just economics 101 concepts here, the economic incentives of the incumbent provider, they control the connectivity to the customer. It is in their interest not to provide connectivity to other people because they would like to keep that customer. So without that firewall there to make sure that we did have fair and equitable access to the customer, the business case would fall. It would just not be there.

Ms. Eshoo. Thank you very much. I think I am out of time. Thank you.

I will submit the rest of my questions for the record. I do have them for Mr. Feld and other witnesses. Thank you.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Walden. We will now go to Mr. Barton for 5 minutes.

Mr. Barton. Thank you, Mr. Chairman.

Last weekend I finally got to go home to Texas after the government shutdown. And I hadn't been there. It is the first time in the 29 years I have been in the Congress that I had spent two consecutive weekends in Washington, D.C. So obviously I was glad to get home. And when I got home I walked into my house and decided to make a phone call and I didn't have a dial tone. And the phone was provided by AT&T, a legacy carrier.

So I got the phonebook out and I went through the protocol on page 9, you know, dial 1-800 and we will be happy to help you, and said, now, if the problem is on your phone in the house, it is 99 bucks. If it is not, we will come out and fix it for free.

So, anyway, I went through that and I finally self-reported a problem and I did all the things you are supposed to do, and they called back and said we will be out tomorrow by 8 p.m. Well, the next day by 8 p.m. they weren't out. So I picked up my cell phone, which was provided by Verizon, and called and hit OOO and I finally got a sweet lady in Houston, Texas, and I said my phone is not working in my home and I still haven't got the serviceman, and she agreed with me and she said, we will be here tomorrow. And, by golly, they were, and they fixed it. Boom. And the guy could not have been nicer. Could not have been nicer. But the moral of that story is I had to use a wireless provider to get my hard line phone fixed.

In 1996 CLECs, they were competitive, and we wanted the CLECs to compete with the ILECs, the incumbents. Now, since 1996 my congressional district has changed four times, but we are still operating under rules that we put in place for an old system. And it is time, just like our congressional districts change every 10 years -- in the case of Texas we changed 2 times in addition to those 10-year changes -- we really need to relook at this. And I love AT&T and I love Verizon and I love the CLECs and all the independents out there, but what I really love is consumer choice and market efficiency and competition that works.

So my question to Mr. Cicconi, who I have known since way back when, even before I was a Congressman I knew Jim, would the group that you represent guarantee access if we did away with some of the regulatory protections under Title 2?

Mr. Cicconi. Well, first, Congressman, I am sorry for your service problems.

Mr. Barton. Well, we have had rain problems.

Mr. Cicconi. But I think you made an important point, and that is there are alternatives out there and wireless has become an alternative for wireline phone service, and there are many, many competitive carriers offering wireless services. Cable offers phone service today, I am not sure in your area or not. But there are an array of choices out there. And so I think that consumers have those choices today.

Now, is it a legitimate function of government to ensure that

everybody is connected and has the ability to communicate? Absolutely. Our company has always stood behind the principle of universal service, and I think that is an important function of the government, to ensure that the choices are there and that they are available to all Americans.

Mr. Barton. Well, to the average consumer, a consumer doesn't care whether they are serviced by an ILEC or a CLEC. What they want is service. What they want is something that works, that is efficient, and that is cost competitive. So our job on the committee is not to protect an existing market segment. Our job is to do the very best we can to give our consumers choices.

And I want the CLECs to stay in business. I am not anti-CLEC. What we passed in 1996, it might have worked for 1996, but that world doesn't exist today, so let's figure out what exists today and in the future and go that way.

And with that, Mr. Chairman, thank you for the hearing and I yield back.

Mr. Walden. The gentleman yields back.

We turn now to the gentleman from California, Mr. Waxman.

Mr. Waxman. Thank you, Mr. Chairman.

Based on some of the testimony we heard today, one might think that we are evaluating a new network being built across the country, an IP network that runs on fiber lines and wireless airwaves. Others suggest that this is no new network, but that new electronics that have been added to the copper and fiber

infrastructure that has been transporting voice and data throughout the country for years.

Why are these distinctions important? If what we really care about are basic values like protecting consumers and competition, universal service and public safety, why does it matter what kind of infrastructure communications runs over?

Mr. Feld, it is my understanding that Google is currently planning to offer extremely fast Internet access over new fiber networks being deployed in three communities. Although consumers can sign up for video service to complement their Internet access service, Google is not offering a voice product. Google has not been shy about stating that it is not offering voice at least in part due to the complex rules associated with providing telephone service.

What do you think of Google's argument that a company like Google be saddled with regulations if it decided to add voice to its video and broadband offering?

Mr. Feld. I think that there are a couple of points that need to be very clear. First is that when Google talks about the regulations that they found too burdensome, they are not talking about the 251/252 kind of regulations that have been the focus of the debate here. They are talking about the things that we all agree ought to stay in system, like 911, like consumer protection and privacy protections, all of these things that we have said, yes, that is very important.

Mr. Waxman. Well, what are they talking about? Give me examples of what they are concerned about?

Mr. Feld. Well, it is expensive to maintain the 911 system. It is expensive to contribute to the Universal Service Fund system to ensure that all Americans are connected.

Now, we believe that it is very important to maintain these things. We believe that it is very important. Google likes to collect the information of the people who use its services. They aggregate it. They have one level of privacy protection for that. Their business model is based on a couple of different things.

In the phone world we treat this very differently and you cannot treat phone call information the same way that you would treat a Facebook status update, that people hold that very closely. And I understand for Google to say we don't want to get into that business. But if we were to say, well, okay, we want to encourage Google to get into this business so we want to eliminate these kind of vital consumer protections, I think that would be a very grave mistake.

Mr. Waxman. So even if they choose not to offer telephone service, that doesn't lead you to the conclusion that we ought to eliminate the rules for all telephone services.

Mr. Feld. Oh, not at all. And, in fact, I would point out any business looking to enter a market figures out what the tradeoff is and what their business model is. We have a thing that is very valuable in a network that goes everywhere and uses

telephone numbers. And I will point out that when we have companies that are voice providers, pure voice providers that want to use those telephone numbers, we impose certain obligations on them already, and businesses make the evaluation of whether the benefits of getting into that business are worth the expense.

Mr. Waxman. That is their decision for themselves.

Mr. Feld. Yes.

Mr. Waxman. Now, for the rest of public policy and for everybody else, given the importance and complexity of transitioning voice services to an all-IP network, wouldn't it make sense to have a trial overseen by the FCC to help collect data based on real world experience and challenges? This past May the FCC issued a public notice seeking comment on trials related to the IP transition. Then Chairman Julius Genachowski stated at the time, quote, "Trials are a smart approach that the FCC has deployed before."

In the public notice the FCC invited carriers interested in pursuing a geographic trial, like AT&T, and they proposed to submit a more detailed, comprehensive plan, including the design of the trial, that data that would be collected, the rules that would need to be waived, and the role of the States and the tribes. It seems to me that the FCC is approaching this issue methodically and thoughtfully.

So let me ask in the short time I have left to anybody on the panel that wants to jump in on this, do you believe that the FCC

is moving ahead in a diligent and responsible manner in exploring potential trials on the IP transition? And if you don't, what would you do differently?

Mr. Feld. I would say that, yes, I think the FCC is behaving exactly appropriately. They have invited further comment. I think that we cannot treat conversion of an entire wire center as something --

Mr. Waxman. Let me hear if there is somebody with a contrary position? Mr. Cicconi?

Mr. Cicconi. I don't think I would be directly contrary. But I think there are a couple fundamental points here. I think, first of all, when the FCC put out its additional questions, I think we all recognized that the FCC was going through the leadership change from the former chairman to a chairman not yet confirmed by the Senate, and I don't think, honestly, Chairman Waxman, they were prepared yet to answer the question.

But I don't think they should be leaving open the question of whether we should have trials. I think when we filed the petition almost a year ago we asked them to actually set up the trials. This isn't an AT&T project. As somebody said earlier, it involves government, it involves the entire industry, and it involves consumers and stakeholders, and it shouldn't be up to AT&T to come up with the plan. We actually proposed industry-wide trials to the FCC that the FCC would actually help put together in a collaborative way working with everybody.

And so I think they have at least to this point punted on that decision. I don't think not having trials is an acceptable answer because I think it would in essence be the government saying, we are not going to plan for this. And when you did the DTV transition --

Mr. Waxman. Your point is the trials are not methodical and they are not fully thought through?

Mr. Cicconi. Right. The FCC actually planned the DTV transition, conducted the trials, learned from them, and it went fairly smoothly, and I think that is what needs to happen here and that is what I still am very hopeful will happen.

Mr. Waxman. Thank you.

My time has expired. It is up to the chairman if you want to let anybody else respond.

Mr. Iannuzzi. May I comment please?

Mr. Walden. Mr. Iannuzzi, real quick.

Mr. Iannuzzi. With all due respect, the concept of a trial, in my opinion, is a boondoggle. The reason behind it is that we do IP all over the place today in interior of networks and how we connect with other cooperative parties. We have got smart people. We know how to do this stuff right now. We are losing ground in terms -- do you want to try to make the revolution of IP even more profound? Then let's get going with it.

Are there things that we have to attend to, to tweak stuff? Sure. But in terms of the mechanics of it, it is making it sound

like water is hard, if you want to make it seem complicated. You could take anything and make it sound more difficult. It is done today all over the place.

Mr. Walden. All right. We are going to have to move on. We go now to Mr. Latta for 5 minutes.

Mr. Latta. Thank you, Mr. Chairman. Again, thanks very much for holding the hearing today.

And thanks to everyone who is testifying today. We really appreciated hearing your testimony.

If I could start with Mr. Cicconi, if I may. As the gentleman from Vermont mentioned, he and I have worked on different issues, especially concerning rural call completion. It is big for both of us. And I have a very unique district. I go from urban to suburban to very rural. And one of of the things that -- I have met with a lot of my rural telecoms out there, is that they have had problems with dropped calls. This is a serious issue for folks out there, because again if you have family members that are elderly and you are trying to call them and all of a sudden they are not picking up that phone, then your next recourse is you call the local law enforcement or the fire department, hey, can you go out and check on a family member.

In the same way it really hits small businesses or any businesses out in these areas, because again I have a lot of businesses that are located way out and all of a sudden if all of their calls are getting dropped, if somebody can't make that call

they lose business and pretty soon they are out of business. So as we are looking at what is happening out there, as the networks, especially the rural providers, transition to IP, how do you think this will affect the call completions in the future?

Mr. Cicconi. Well, notwithstanding Mr. Barton's earlier service problems, I am not aware that AT&T itself has a rural call completion problem, but I am very aware that there is a problem there. The FCC has a proceeding underway right now to try to deal with it and to deal with it in a way that applies across all technologies and across all providers, and that is the way it should be. And I think it is an example of what an appropriate role of government should be.

Mr. Latta. But do you think as we go forward with the IP, especially the rural providers, do you think it will help them to make sure that they don't have the dropped calls in the future?

Mr. Cicconi. I would be hopeful. But, again, I think that is one of the reasons you have trials, to test these things, make sure they work properly, make sure the replacement technologies are just as reliable as the others.

And just in response to what Mr. Iannuzzi said a minute ago, too, we can't go out and convert a wire center today from TDM to IP without permission from the FCC. So while a lot of IP investment is going on, we can't do the fundamental investment. There are 20,000 wire centers in the country that have to be converted to IP and not a single one of them can be converted

without permission from the FCC today.

So that is why we need the trials, to take two of those wire centers, it is all we have proposed out of 20,000 nationally, conduct the trials and see if we can accomplish this without the kind of problems that you have experienced in the rural areas and ensure, frankly, that the replacement services and technologies are actually better and don't have those issues.

Mr. Latta. Thank you.

Mr. May, in reviewing your testimony, in your section number three it says, "Ultimately, Congress needs to replace the current Communications Act with a new digital age communications act," and you state that "because of the extent of the dramatic marketplace changes wrought by the IP transition that has already been described, it seems to me that Congress ultimately needs to comprehensively overhaul the Communications Act by adopting a new free market-oriented model that breaks thoroughly with the past."

Could you elaborate on that, please?

Mr. May. Yes. Thank you, Congressman Latta.

One of the reasons why ultimately Congress should pass a new act, it really goes to a lot of the discussion we have had today back and forth talking about technology, whether policies are technology neutral or not and how that relates to competition.

The reality is the current act is not technology neutral really at its core. We talk so much, those who are in this area talk about the smokestack or stovepipe regime, because in essence

the act establishes different types of regulation based on different types of technical or functional constructs, and that is not the most efficient or most sound way for regulation to go forward.

So what should happen really in the future is competition is obviously important, as Mrs. Eshoo has talked about. We all want competition. But what we want to have really is an environment, and in fact the digital revolution is enabling more competition. That is why we have these, that we have cable and wireless and fiber and all of these things are part of the digital revolution.

But ultimately in a new act what we would like to have in my view would be a standard that ties the regulatory activity of the agency closely to an analysis of the competitive marketplace, and then only if there is a market failure or consumer harm, and I recognize if there is consumer harm there is a place for regulation.

I am not, like Mr. Cicconi, I am not advocating no regulation. But we need in a new act to tie regulatory activity much more closely to an analysis of the marketplace. And that really gets away from all this discussion about this technology and that technology and that type of thing. But the fact that technology is changing and it enables competition, that is a reason for policy changes. It is not a reason to do nothing.

Mr. Latta. Thank you.

Mr. Chairman, my time has expired and I yield back.

Mr. Walden. The gentleman yields back.

We turn now to the gentleman from Pennsylvania, Mr. Doyle, for 5 minutes.

Mr. Doyle. Thank you, Mr. Chairman.

Mr. Chairman, this morning I read in the newspaper that AT&T recently notified many of its special access customers that it will eliminate certain long-term discount price plans, effectively increasing rates by as much as 24 percent. Competitive carriers argue that they have no alternatives to gain last mile access to business customers and must simply accept the higher prices.

Mr. Chairman, I would like to ask unanimous consent to place a copy of that article that appeared in the Wall Street Journal this morning and a copy of the ex parte filing that several companies made to the FCC in regard to those rate hikes.

Mr. Walden. Without objection.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Doyle. Thank you.

Let me ask Mr. Feld and Mr. Iannuzzi, how can AT&T institute up to 24 percent price increases if these markets are competitive? And do you find fault in claims by some that competition today eliminates the need for a regulatory backstop, particularly in light of AT&T's action to effectively raise special access prices?

Mr. Iannuzzi. Sure. Only a dominant market player can go and raise prices ad hoc and to that level of magnitude. It was quite shocking to see that take place where those network elements are very vital to run the connectivity within our network. So if there was true ability to shop and pick, then they would be foreclosing those sales and those revenue streams. And AT&T is in the business to make profit, and to then just raise prices, if the market was working and there is an equal service, you would go pick the next lowest provider, provided they had equivalent capabilities.

Mr. Feld. I would add that we often have a confusion between the underlying infrastructure and the things that ride on top of the underlying infrastructure. And we look at the number of wireless carriers, the number of carriers that offer service through that underlying infrastructure, and looking at just the surface of that we say, wow, there is a lot of competition. But when you actually get below the surface to the infrastructure on which all of that competition rides, you have still the same kind of network problems, still the same kind of infrastructure

monopolies that you have to worry about.

So I think that what we have seen in special access -- and this is not a new problem, this has been going on for many years -- is that there was a lot of hope and anticipation when we set up criteria about how we were going to tell whether there was competition. Some of that did not happen, but also the criteria were, frankly, too optimistic and did not take into account the difference between people offering retail service or people offering different kinds of commercial service and the critical infrastructure that you have to get to in order to reach the customers to offer that.

Mr. Doyle. Thank you.

Mr. Cicconi, would you like to respond.

Mr. Cicconi. Yes, sir.

First of all, let's be clear. When we are talking about the special access facilities mentioned here, we are not talking about services that are broadband. The FCC has not classed these services as broadband.

I think one of the reasons, Mr. Doyle, that you read the Wall Street Journal article that we are not offering service contracts out 5 and 7 years is because we plan as part of the IP transition, the reason we are here today, to be replacing these old facilities with modern broadband fiber-based facilities, including ethernets. So naturally we don't want to be offering long-term contracts on a facility if we are going to be replacing it with an alternative

facility.

There is a proceeding underway on special access currently at the FCC that is designed to gather facts on what alternative facilities are available for other providers like TelNet to use. We think that the data the FCC collects from all providers, including cable, is going to show that there are ample alternative facilities there.

And one of the alternatives, by the way, is for a CLEC to build its own facilities. We right now have a project underway, and hopefully within 2 years we will have run fiber to 1 million businesses in our 22-State footprint. And I think any other carrier out there is free to do the same thing.

Mr. Doyle. Mr. Cicconi, listen, I understand that you are transitioning and that it probably makes sense that you are not going to do 7-year contracts. I think the concern is not so much that you are discontinuing the long-term contracts, but that you are raising the rates, you are not passing down the discounts. And if this were truly a competitive market, I don't know how you could get away with doing that.

Mr. Cicconi. Mr. Doyle, I have to go back and check on the rates. But I don't think we have raised prices. I think we have eliminated some rate plans. But I don't think prices have gone up.

Mr. Doyle. I would like to see that.

Let me just -- well, Mr. Chairman, I see my time has expired.

I will just wait for another time. Thank you.

Mr. Latta. [Presiding] The gentleman yields back.

And at this time the chair would recognize the gentlelady from Tennessee, the vice chair of the full committee, Mrs. Blackburn.

Mrs. Blackburn. Thank you, Mr. Chairman.

And I want to go back to Mr. Waxman's question, talking about the peering agreements. Mr. May, let me come to you, and then, Mr. Feld, I am going to want to hear from you. Do you think the FCC should do a pilot project and test some of the IP networks to figure out how to make the transition easier for consumers, for businesses? Where are you on a pilot project?

Mr. May. I am in favor of one, but I have to say I probably don't need to be as delicate as Mr. Cicconi may need to be. I think the FCC has been a little slow, I would say, in getting these trials off the ground, so I would like to see them move quickly. And I think they would yield useful information. But I don't want to see them used -- over a long time of watching the FCC, sometimes I know when you start things like this they can be used in ways that delay ultimately the ultimate decision making. That shouldn't be allowed to happen with these projects.

You started out by mentioning the interconnection, I think, in the IP transition. And I just want to say, and I said this in my testimony with regard to IP-to-IP interconnection, I don't think that -- and I am just assuming we will have the trial or

not -- but ultimately I don't think the FCC should presume that it is going to regulate these interconnection agreements in the same way that it did in the TDM world. It is likely that there won't be many interconnection problems. That hasn't been the case with pure IP-to-IP connection. Thus far they have been very rare that there have been disputes. They have ultimately have been worked out really in a voluntary marketplace way.

So my counsel would be for the FCC to just presume that it is not going to intervene, that we watch the situation. If it does turn out that there is a real problem with interconnection, I said in my testimony that there could be a regulatory backstop. But it shouldn't look anything like the current 251/252 process that basically really resembles more of a public utility style regulatory regime. It should be a dispute resolution process that ultimately depends on mediation, and perhaps ultimately baseball-style arbitration or something like that.

Mrs. Blackburn. Okay. Mr. Feld, anything?

Mr. Feld. First, we support having well-constructed trials. I do think that the FCC has been behaving responsibly, however. What AT&T has put in so far is much more akin to a phase-in or a beta test, which you get to at the end, rather than time-delineated trials with suitable safeguards, which are really where we are now. We saw what happened when you tried to flip a wire center on Fire Island this summer, and I am very glad to hear AT&T say we don't want to do a flash cut like that.

The issue here is, as the FCC properly said in its proper notice, is that while the trial is voluntary for the carrier, it is not voluntary for the customers. And the other point I would make is that in a network if something goes really wrong and the wire center starts to go down, it can take down other portions of the network with it.

So we believe in being cautious, but we think that, as with any other kind of trial, there needs to be appropriate safeties in place and that those need to be described and settled before we initiate any trials rather than after we get into it.

Mrs. Blackburn. All right. Thanks.

I am going to yield my time back, Mr. Chairman.

Mr. Latta. The gentlelady yields back. And at this time the Chair recognizes the chairman emeritus of the full committee, Mr. Dingell, 5 minutes.

Mr. Dingell. Mr. Chairman, I thank you for your courtesy and I commend you for this hearing. I also wish to express my thanks to Mr. Welch for his courtesy to me. Thank you.

I would like to begin by welcoming a fellow citizen of Michigan, Mr. Mark Iannuzzi, this morning. His company, TelNet Worldwide, offers valuable services to the businesses of Michigan.

At issue this morning is the transition to IP-based communications networks. As some of our witnesses have noticed, this transition is already underway and has the potential to confer significant economic and technological benefits on our

people. But we need to learn more about what that transition means for the future of communications in this industry and particularly as to how it will affect the consumers.

Incumbent carriers make the very valid point that they are required to maintain TDM networks at great cost despite the fact that only 30 percent of all Americans used ILEC switched networks in 2012. It is my view that the billions spent to maintain legacy networks can be be more efficiently based and invested in IP-based networks that will be the backbone of the 21st century telecommunications. This part will help advance the goals of the 2010 National Broadband Plan.

With that said, I understand that AT&T has petitioned the Federal Communications Commission for forbearance from certain regulations in order to establish two geographically limited IP-based test projects. I think there is real value in this approach. It will provide an invaluable case study to consumers, businesses, policymakers, and to the government about what the transition to IP-based networks will entail. I encourage the Commission to work with AT&T to set these projects in motion, making certain that there are mechanisms in place for monitoring and effectively resolving consumer complaints.

In addition to the lessons that we can learn from AT&T's potential trial projects, I suggest that policymakers also keep in mind several fundamental principles when considering the role of government vis-à-vis IP-based communications. As public knowledge

has wisely suggested, our focus should be on ensuring universal connectivity, interconnection and competition, consumer protection, network reliability, and public safety. Those are very important principles to be kept in mind as we go forward.

I firmly believe that there still exists a need for certain ex-ante obligations because the Communications Act's purpose is to make available insofar as possible to all -- and I emphasize all people of the United States -- the benefits of our communications system. That presumption and that comment is as valid today as it was 79 years ago.

Mr. Chairman, I thank you for your courtesy. I am yielding back a minute and 24 seconds. And I thank Mr. Welch, and I will be happy to yield to the gentlelady.

Ms. Eshoo. I appreciate it, Mr. Dingell.

Can I just pursue this issue of the trial? It seems to me that there is kind of a chicken-and-egg thing going on between the FCC -- maybe it is because we don't have a full Commission yet -- but it seems to me the following. And I could be wrong, so, Jim, you just jump in and tell me if you think I am wrong. You will do that anyway.

But anyway, you want the trials, you want the FCC to approve, give you the green light to go ahead with a trial. It seems to me that the FCC is saying we will do a trial but we want the following things in it, and there is not an agreement. Does that look anything like how you see reality? Because time is going on.

Mr. Cicconi. Right.

Ms. Eshoo. And I think what Mr. Dingell said is it is just on the mark. We need to get going.

Mr. Cicconi. I honestly think it may just be a function of our timing on this, as one chairman is on his way out and another Chairman isn't yet in there. The questions actually issued were fairly recent, I mean, and they waited until 6 months after we filed the petition to actually ask the questions. And, frankly, I mean, like a lot of you, I have been around the town a while and I took the questions as a way of the FCC saying we are not ready to answer this yet.

But I do take comfort in the fact that we have Democratic and Republican Commissioners both on the FCC who have said, yes, we should have trials. Mr. Pai said that, Commissioner Rosenworcel has said that, categorically go forward. The principal author of the National Broadband Plan, Blair Levin, has said, absolutely, he would have said yes to the trials on day one.

I think the key, Congresswoman, is this isn't about us exclusively, it is industry-wide and it is nationwide. And I for one have been reluctant to put in the FCC a, quote/unquote, AT&T plan for conducting the trials. I think it is really the job of the FCC to work with all of industry and all stakeholders and, frankly, State-level government as well to design those trials, much like was done during the DTV, and I am pretty confident that once Chairman Wheeler gets there that that is what will happen.

Ms. Eshoo. Great. Thank you.

Thank you, Mr. Dingell.

Mr. Latta. The gentlelady yields back her time to the gentleman whose time has expired.

And the Chair now recognizes the gentleman from Illinois, Mr. Shimkus, for 5 minutes.

Mr. Shimkus. Thank you, Mr. Chairman. Great hearing. I have learned a lot. And I love trying to stay as long as I can because you really do hear the point-counterpoint. But you never miss the opportunity to hear a member bring up a personal story. So, Mr. Cicconi, I am sure your staff prepared you for that personal story, and if they didn't then you might need to look for other staff members.

Mr. Cicconi. I wish, Mr. Shimkus.

Mr. Shimkus. But let me address, and I always get concerned when I start agreeing with Mr. Waxman every now and then. I have to check the data file on that. But I do agree we need to move on a test. We just need to move forward.

And to his comments on Google, they are probably out here or they are listening, I would encourage them to come in, because my guess it is 251/252, is why they are not into voice. That is what my guess is.

Now, if you have talked to them, Mr. Feld, and they have given you that data. But I think there is interconnection issues. It is very informative that they are not doing that, and I think

that is a lesson we should learn and find out.

So having said that, just a blanket statement, and I know the FCC is looking into this, these dropped calls in rural areas are an issue. And that talks about a backstop. I mean, that also reinforces an issue of having some type of backstop. So I want to raise that.

But to Mr. Feld and Mr. Cicconi, public safety is a big issue for all of us here. Anna and I work very closely on this. In this move, how do you envision public safety being positively, or maybe -- hopefully not negative -- we won't accept a negative, obviously, response on public safety. So how do we deal with that? Why don't we start with Mr. Cicconi and then we will go to Mr. Feld.

Mr. Cicconi. I mean, I hate, Mr. Shimkus, to sound like it is circular reasoning here, but I think this is one of the reasons we need to have the trials out there. We are fairly confident that we can design these systems in a way that takes account of public safety. Moreover, we fully accept that they have to work well for public safety. You simply can't have a new technology deployed where 911 doesn't work or other public safety features don't work. So I think we all recognize this is imperative, and I think we need to stress test it to ensure that it does work and that we can transition it accordingly. But I think we all accept the obligation has to be there and we simply can't replace the old technology with new technology unless 911 works.

Mr. Shimkus. Thank you.

Mr. Feld.

Mr. Feld. Two things. One, planning precedes trials rather than trials preceding planning. And the thing that has been troubling to me is I get that we will need to have some information that we will gather in the trials, that is the point of doing trials, but before we say let's throw a switch and see what happens to public safety on this stuff, I want to know what the recovery mechanisms are, I want them to have limited tests first before you move on to full tests.

The other important factor is we need to start thinking of how we make a more robust public safety system in our competitive and differently enabled technology universe. There is virtue in redundancy. So maybe we don't have to put everything on every network the same way if we have ways in which the networks will work together that are for public safety.

We have seen some things coming out the Hurricane Sandy hearings that the FCC has been conducting where we have seen how different technologies have different strengths and weaknesses and have responded in a different way. And I think that one of the exciting advantages of the IP transition is that it allows us to start thinking about how to take advantage of the structures of the Internet which rely on redundancy and flexibility for stability rather than requiring 59 liability from every single network that is participating.

The last thing I will just mention is we do have to be wary of new issues that are coming up. I mentioned in my testimony the problem of swatting, which is caller ID spoofing, which allows people as a joke to send SWAT teams to other people's houses. That is not a particularly funny joke. And while obviously these are challenges that need to be resolved, we need to be accumulating this checklist of what needs to work as we move forward.

Mr. Shimkus. Yeah, and let me finish on this. I have been really involved with trying to raise this issue with the FCC with the convergence of technology and I have given up. I don't think we will ever change the FCC and the bureaus that it has.

The last thing, the question is, Mr. Iannuzzi, have you seen in the business sector the cutting of the cord from landline to cell for the business community as we have seen in residential services?

Mr. Iannuzzi. Mr. Congressman, an excellent question. In the business community it is a distinctly landline-oriented business. While mobile phones are part of the workforce for the common employee, the way that businesses communicate and collaborate is inherently a landline type of function. It is because there is group capabilities going on. You are continually interacting with a wide variety of locations perhaps, and so forth, which is not conducive to how cellular technology has been deployed, which is more about the individual and how that connects

together.

If I may on your very important item here about security and public safety, the competitive energies already have migrated for the most part to IP-based 911 service. It is a far superior solution than currently the legacy TDM one. Why? Because when we are trying to get our customers' calls to an emergency authority, the IP network allows us to make sure that if there is any bottleneck to get to the public safety point, we have alternate routes to alternate safety points to get to them or answer it even through our own operators to make sure that we connect the dots.

Furthermore, we have added in cool technology where if somebody picks up the phone and they dial 911, we not only send the call to the public safety organization, but we can then send it to the building supervisor, the provost of the university, or if you are a residential user you could go to -- you are out at the show and somebody calls 911 from your home, we will sent it to your cell phone so that you know that 911 call was made from your home. So we have already made that move.

And this thing about the IP-to-IP interconnection, yes, do you have to do things in a measured fashion? Certainly. But when it comes to network center connecting and peering at the IP basis, that is different than how you are talking to the end user, and that IP-to-IP interconnection goes on right now.

Mr. Latta. Thank you very much. The gentleman's time has expired.

And the chair now recognizes the gentleman from Vermont, Mr. Welch, for 5 minutes.

Mr. Welch. Thank you very much, Mr. Chairman.

Mr. Burke, thank you for being here. Your testimony mentions a few carriers in Vermont are investing in fiber, and my question is what policy decisions would change carrier incentives to invest in rural areas and are there regulations that are imposing unnecessary costs that are hindering any of that investment?

Mr. Burke. Thank you for the question, Congressman. I think that it is a very tricky question when you get to how do we move out into a better business plan in more rural areas. I mean, dollars are dollars. And I guess to call on a predecessor of my own, I will go back to my grandfather. He was a dairy farmer, and I can remember when I was little he said, you know why this stool has three legs, Johnny? And I said, no, sir, I don't. He said, because if it had two it would just fall over.

And I think that is actually what we may be dealing with here. I think we actually have a potential as we move forward into an IP world, and we are moving there, to be able to do it in a better and more focused way if in fact we use a stool with three legs; the Federal leg that obviously is your responsibility and the FCC's; industry's leg and how we get out there to make ubiquity part of the process here, because if it is not ubiquitous it doesn't really work the way we want it to work; and last but not least is the States' responsibility and the States' ability,

be it with their own USF funds to help manage to get this stuff out there, or be it their policies to help make the move-out for industry itself more seamless, easier, and more attractive to their business plan. The States are a vital part of this. And without three legs to that stool, I am not so sure that it has got any chance of succeeding.

Mr. Welch. Thank you.

For Mr. Cicconi and Mr. Iannuzzi, just quickly, what actions are required by the FCC in order to ensure that competition will continue and actually thrive in an all-IP world? I would appreciate it if it was quick and ABC, because I don't have that much time. I will start with you, Mr. Cicconi.

Mr. Cicconi. Well, I think you have competition today, Mr. Welch, and I think as the FCC moves forward with the IP transition it certainly ought to take a look at what regulations are needed going forward to help preserve the competition that is there today. I would certainly grant that. But I would also suggest that on a going-forward basis that it would be a mistake to assume that the problems of the present and the future are necessarily the same as they were in 1996 or 1934.

So I think the notion of taking legacy rules and applying them to new technology is something the National Broadband Plan actually spoke to, and it talked about how applying legacy rules could actually retard the investments that were necessary and could have unintended consequences of siphoning investments away

from the new technologies that were needed. So I think that would be our main concern, is that we not overcorrect here and assume there are problems until we actually know what those problems are.

Mr. Welch. Thank you.

Mr. Iannuzzi?

Mr. Iannuzzi. It is very simple. In terms of the FCC, we just need the clarity that removes, that if there is any technological implication in the way the act works, it is technically neutral. Communication systems are by their design technical, so if there is not technical advancements, then what were we trying to do in terms of trying to get where we are at, if we weren't trying to make things better, faster, cheaper, smarter.

So my point here is that the key thing to ensure competition is to eviscerate. Take out the eraser on the spot that we have the technology underpinning to the act, because it was about creating competition. It was a framework to correct a market-based structure so that we could compete.

Mr. Welch. Thank you very much.

Back to Mr. Burke, we have got a real epidemic of rural call completion, and as far as my constituents and the people you serve as well, our concern, fixing that problem, can't come fast enough. How can IP transition help to address the issue of incomplete calls, particularly in rural areas?

Mr. Burke. Well, I think that obviously you have to take a look as you move forward here with where the problems lie. And if

you take a look at what we will see I think in call completion, the order comes out next Monday, I believe, is the date that the FCC is actually going to issue it. The fact of the matter is that call completion is probably a methodology that grew from terminating access charges, and as least-cost routers sensed heavy terminating access charges, they decided that they would not complete the call. Least-cost routers are innovation, too, and we can't get carried away with innovation. Certainly it has given us a lot of good things, but I suspect the idle innovator like the idle hands can be the devil's work thing, too, when it wants to be, and in fact that may have been the case here.

How we go forward is to try to make sure that there is a regulatory touch as well that keeps an eye on moving forward in this transition. Mr. Cicconi hasn't said that that isn't the right idea. I would point out, too, that with call completion, that began, and the answer to that began through the States.

When the problems occurred, I know that you got them, Congressman. You said that you did, and I believe that you did. But the fact of the matter is most of the time your public service commission or your AG's office probably got them first as people became unhappy with what they were getting and what they weren't getting in rural America. And hopefully keeping those regulations in place will allow for consumers to get the kind of protection that they have learned to expect in their old network as we move through to a new one.

Mr. Welch. My time has expired. I yield back. Thank you.

Mr. Latta. Thank you very much. The gentleman yields back.

And the chair now recognizes the gentleman from Louisiana, Mr. Scalise, for 5 minutes.

Mr. Scalise. Thank you, Mr. Chairman. I appreciate your having this hearing.

And I want to thank all of the witnesses for coming and testifying and giving your perspective on the changes in technology. I am excited by it, when you see the things that people are able to do now as we have this transition to Internet protocol. You also have coupled with that the upgrades that are being made from copper to fiber optics. And, of course, that brings billions of dollars of investment. It gives consumers a lot more options to do things with voice and video and sending larger packets of data.

Of course, the investments that go with it, I know, Mr. Cicconi, your company and other incumbents are investing billions of dollars to help build out these new networks, to use this new technology in better ways even with the current regulatory environment. I want to ask your take, because some would say that the fact you are investing these billions of dollars proves that there is no need to change the regulatory structure. How would you answer that?

Mr. Cicconi. Well, I think that the first thing I would do is kind of refer back to the chart, Congressman, that opened the

hearing here that talks about the way the market is set up today, where by the end of this year we will have three-quarters of Americans using either wireless only or VoIP providers as opposed to the circuit-switched provider. As I said earlier, we have fewer than 14 million circuit-switched telephone customers at AT&T at the present time, which is a small fraction of the numbers that any other provider has out there in these competitive markets. So I think that would be the first point that I would make.

The second point is that the investment that has occurred over the last few years in wireless and IP technologies is, of course, I think it is related to the fact that these are the least regulated areas of technology. It is not accurate that the 1996 act is technology neutral. In fact, it penalizes wireline technologies uniquely by imposing a lot of extra requirements on them. And I think that is one of the reasons that Google has decided not to offer VoIP service in a city like Kansas City.

Mr. Scalise. And that is a good point. I want to ask you about that, because the 1996 Telecommunications Act does impose some ILEC-specific rules. How does that actually affect your investment decisions?

Mr. Cicconi. Well, I think on a going-forward basis with IP, I think we hear what Google hears, which is some companies advocating that we simply take the common carriage model in Title 2 and apply it as if nothing has changed to modern competitive IP services. And I certainly think that is not what the act

envisioned. I also think it would be a big mistake. But it creates regulatory overhang for a company like Google or a company like AT&T in deciding to make a wireline investment decision.

Now, to the final point, we have gone ahead anyway here recently and decided to invest in this area. And, quite honestly, it was a difficult decision for us, running fiber to these buildings and expanding our user services to millions more Americans, including in a lot of rural areas. But I think it is a leap of faith on AT&T's part in terms of the regulatory environment. We have read the National Broadband Plan. We take comfort in the fact that it speaks to these issues, it has been endorsed by the President, it has been endorsed by the Congress on a bipartisan basis, and I think it gives us confidence going forward that these regulatory issues and uncertainties will get settled in the proper manner. And, of course, I think one the reasons we filed for the trials is to kind of spur that along.

Mr. Scalise. I appreciate that.

I want to ask Mr. May, because I am running out of time, you have been advocating for an updated Telecommunications Act to reflect the digital age. If you can share with me some of the principles that you would envision. And I left my brick telephone at home because I didn't want to get into that here, but since I have got you here, you might even want to mention something about the 1992 Cable Act, which is probably also very outdated and needs to be updated.

RPTS JANSEN

DCMN CRYSTAL

[12:29 p.m.]

Mr. May. Thank you, Congressman. That is outdated, for sure, the 1992 act. And, frankly, the 1996 act is as well, although at the time it was adopted it, you know, was a transitional piece of legislation that was good.

You know, here are the basic fundamental principles going forward. And you have to think about it really in the larger sense, because, obviously, I have talked about some regulatory backstops and safeguarding universal service and so forth. But in a large sense a new act should get rid of the silos that are in the present act, the stovepipes. And they are not technology neutral, they are based on technology constructs, the different titles. And it should replace the public interest standard that now is in the act in 110 different places, delegates authority to the FCC just to act in the public interest, that indeterminate standard, with a competition-based standard that is antitrust-like. I am not suggesting that you are going to import all of antitrust jurisprudence. But it is going to focus on the competitive marketplace and regulation; therefore, shouldn't be adopted unless there is a market failure or proof of consumer harm.

Then, finally, what a new act should do is circumscribe

somewhat the FCC's general rulemaking authority, which now, as you know, operates in what we would call an ex-ante, anticipatory fashion. When you engage in that process what you do by definition is conjecture harms that may occur in the future because you are trying to conceive of all potential harms.

What happens is generally those types of rulemakings are overly broad, broader than they need to be. So you want to get the FCC to act more in a post hoc capacity, acting on individual complaints that say there is a specific problem. You know, Mr. Iannuzzi says with this carrier in this place there is a market failure for some reason, I have got an interconnection problem. You take it into an adjudicatory context and you try and address that specific problem rather than proscribing a lot of conduct that otherwise might be beneficial to the country otherwise.

Mr. Scalise. I appreciate the answers. And I yield back.

Mr. Latta. Thank you very much. The gentleman's time has expired.

And the chair now recognizes the gentleman from New Jersey, Mr. Pallone, for 5 minutes.

Mr. Pallone. Thank you, Mr. Chairman.

I think we can all agree that the IP transition already underway is good for American consumers, the economy, and the country as a whole. So I welcome this conversation.

However, we must work with industry, public interest groups,

and consumers to ensure that as it progresses these technological advances do not come at the expense of consumer choice and access, public safety, or competition.

I think some of you know that nearly a year ago, October 29th is next week, my district and the State of New Jersey were hit hard by Hurricane Sandy, and one of the many impacts of that devastation was the loss of communication services. Power outages and floods disrupted many types of communications, including wireless, television, telephone, and Internet services. In fact, yesterday, I was with Congressman Leonard Lance and Yvette Clarke and Congressman Holt and Congressman Payne in Newark, and we were talking about this, you know, on a bipartisan, regional basis.

So I wanted to ask, I know some of this has been touched upon. I am going to try not to be repetitive. But I understand that traditional copper networks operate even when power lines go down. So my question of Mr. Cicconi is, because AT&T has a large legacy copper communications network and significant plans to deploy new fiber infrastructure, how will the new fiber networks handle natural disasters like hurricanes? We know that the copper continued to operate. But what happens now with the new fiber networks and, you know, dealing with that issue? How you going to deal with it?

Mr. Cicconi. There is, unfortunately, no IP technology, Congressman, that allows you to power the line. You know, you cannot put power over a fiber connection. Fiber has many other

advantages in addition, though, to its Internet capacity and one of them that I think is relevant in a hurricane or a flooding zone or in a Sandy-type situation is that seawater will destroy copper and make it unrepairable. Fiber is very resilient in that type of situation, and, frankly, so are our wireless networks. They are very resilient. We get them back up and running very quickly after these storms. And I say that, knock on wood, because we are still in hurricane season.

Mr. Pallone. Now, again, I think that we all agree that these communities should not lose services they rely on simply because they are unlucky enough to be in the path of a storm. So if there are, you know, different consequences from these replacement services with fiber, you know, why -- again, I guess this goes back to the trial, but what else can we do? Is there anything else we can do? And what are you going to do with these real world trials so we can -- how do they relate to the problem that I just discussed?

Mr. Cicconi. Well, sir, I mean, I don't want to second-guess, you know, a decision made by other carriers, but I think that what trials and proper planning for the IP transition would allow is for us to test the capabilities of these services, not have people surprised if you deploy a service and a fax machine doesn't work the same way, things of that nature.

I do think it is iterative, though. I think the technology will evolve. And, frankly, we can help it evolve if we know what

we are trying to do. For example, in our wireless home phone service, we have actually asked the manufacturers to add a data capability. That came online this summer. So we actually have that in our wireless home phone product.

But I think as we go forward over the years I would expect that the wireless capabilities will evolve and change to meet those needs so that, frankly, it could be more robust and more reliable and provide all of the same services and more that our copper line facilities do.

Mr. Pallone. Do you have your hand up? Go ahead.

Mr. Feld. Yes, thank you. One of the things that we have asked the FCC to do, and to put priority on this, is to initiate a separate proceeding for disaster guidance. We have, as you know, a situation in Mantoloking, New Jersey, also Fire Island, where Verizon did not know what they were supposed to do. They didn't want to rebuild their copper network, but they also needed, had no guidance for what they should be doing instead.

We think that the FCC, in order to address this problem of public safety, needs to get out there and start a proceeding right now, first thing, as we are doing this transition. And we know that carriers are going to want to put in new infrastructure as they rebuild after storms like Sandy. What are their responsibilities? What are they supposed to do and what can the people in those communities rely on in order to be able to rebuild their lives?

We have asked that. We have had 17 other public interest organizations join us in asking the FCC to begin a proceeding on this, and hopefully we will see action on that as soon as Chairman Wheeler is confirmed.

Mr. Pallone. Go ahead. With the chairman's approval, go ahead.

Mr. Iannuzzi. May I comment?

Mr. Latta. Just briefly.

Mr. Iannuzzi. I would like to point out one key thing here, is that make sure we embrace the small, middle-size business market. A lot of conversation here focuses on residential, and it is certainly important. The charts that I see on the side here talk about a degradation in copper-based usage at the residential level. That is not the case at the business level. That is typically the only connection into there, is copper facility. That copper facility can handle the power line backup requirement you need. So we often deploy where they are working in parallel; we have the next-generation IP technology taking care of all those ones and then we have the copper-based lit services, which are taking care of all those other critical functions and allowing that to work its place out as time goes on.

Mr. Latta. Thank you.

Mr. Pallone. Thank you, Mr. Chairman.

Mr. Latta. The gentleman's time has expired.

And the chair now recognizes the gentleman from Missouri,

Mr. Long, for 5 minutes.

Mr. Long. Thank you, Mr. Chairman.

And thank you all for being here today. And given your testimony, I am kind of the cleanup hitter here. Well, they should have started with me. We would have been done a long time ago.

But, Mr. Cicconi, you made mention earlier in the questioning portion of this hearing that you have read the FCC's National Broadband Plan. And being that you have read that, I will remind you that they came to a conclusion, the FCC's National Broadband Plan, to, quote, "Regulations require certain carriers to maintain plain old telephone service." And they highlight a requirement that is not sustainable and lead to investments in assets that could be stranded.

So if FCC believes that maintaining legacy telephone service is not sustainable, and that investments are at risk of being stranded, shouldn't the FCC change its policies that have caused this problem?

Mr. Cicconi. Well, Mr. Long, I do think it is appropriate for the FCC to move forward. It put together an excellent plan at your direction, at the Congress' direction. It has been widely endorsed. It anticipated this very issue, the words you quoted. And, you know, and unfortunately, we are 4 years along here, and I don't think we have seen the implementation of some of the things that they recommended. But I remain very hopeful that once the

Commission is back up to full strength that they will do so. And, again, our petition last year for the IP trials was designed in part to spur along the very process you just highlighted, sir.

Mr. Long. Okay. Again, when you are the last guy at bat, some of this you have touched on before. But let me ask you to elaborate, if you will, on the types of services that would be available through these Internet protocols that are unavailable on the copper networks.

Mr. Cicconi. Well, I think the IP transition -- and I am at risk of oversimplifying, I am a liberal arts major, not an engineer -- but it by and large is about voice becoming simply another application riding on an Internet pipeline. Okay? So as we build out fiber, we are building out Internet capability and voice then becomes just another application.

And so I think what that provides, obviously, is competitive opportunities for a lot of people. But it also provides much more accessibility. It allows people to design and innovate based on IP. And so you may bring to voice services through this IP transition some of the same innovations you are seeing, you know, in every other form of Internet service. And, you know, if you pull out an iPhone and you go through the app store, I think you can get a sense of the innovation that is available. And I think as we transition these networks toward IP, I think we will see the same types of innovation there. And I think it is obviously important for the country from every standpoint of economic

activity, but also I think from a consumer standpoint too.

Mr. Long. Okay. I represent Missouri 7, which is Springfield, Joplin, Branson area, down southwest corner of the State. And I think that we can all agree, out of the 435 Congressional districts, that I have the best one in the United States. And in that area, there are 11 counties, part of 11 counties, 10 full counties, part of an 11th county. So I have a lot of rural areas along with Springfield, Joplin, Branson. And a lot of my constituents don't have ready access to the latest medical technology, and even the number of doctors that you would find in urban areas. And that is another topic. But can you elaborate on the types of telemedicine and mobile health applications that would be available to my constituents in the best congressional district in the United States if they did have the IP services?

Mr. Cicconi. Well, sir, I think, again, I think if we are able to get the broadband connections into those areas, and they are fulsome and they are both wired and wireless, I think you have an infinite variety of services that are available that are being actually put together by innovators today. I think our entire healthcare system, notwithstanding the current difficulties, is actually innovating quite well in terms of making records available and things of this nature.

Mr. Long. Can you give me any more specifics or anything on telemedicine?

Mr. Cicconi. We can certainly pull together something for you, Mr. Long, and get it to you. I don't have anything specific I could lay out in the hearing here today, though.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Long. Okay. I have zero seconds. So with that, if I had any time I would yield it back.

Mr. Latta. The gentleman yields back, and his time has expired.

Seeing no other members wishing to ask questions this afternoon, I want to thank you for this excellent panel. And I am sure that the chairman would also want me to extend his heartfelt thanks for you all being here today.

And without anything else coming before the committee today, we will stand adjourned.

[Whereupon, at 12:44 p.m., the subcommittee was adjourned.]